

DRAFT

MAG Conformity Analysis Executive Summary

**FY 2002-2006
MAG Transportation Improvement Program**

**MAG Long Range Transportation Plan
Summary and 2001 Update**



EXECUTIVE SUMMARY

This report presents the 2001 MAG Conformity Analysis for the Draft FY 2002 to 2006 MAG Transportation Improvement Program (TIP) and the Draft Long Range Transportation Plan Summary and 2001 Update (LRTP). The Maricopa Association of Governments (MAG) is the designated Metropolitan Planning Organization (MPO) in Maricopa County, Arizona, and is responsible for regional transportation and air quality planning. The analysis demonstrates that the criteria specified in the federal transportation conformity rule for a conformity determination are satisfied by the TIP and LRTP. A finding of conformity for the TIP and LRTP is therefore supported.

Summarized below are the applicable federal criteria or requirements for conformity determinations, the conformity tests applied, the results of the conformity assessment of the TIP and LRTP, and an overview of the organization of this report. Figures presenting the conformity test results are provided at the end of the Executive Summary.

CONFORMITY REQUIREMENTS

The federal Transportation Conformity Final Rule (40 Code of Federal Regulations Parts 51 and 93) specifies criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The federal transportation conformity rule was first promulgated in 1993 by the U.S. Environmental Protection Agency (EPA), following the passage of amendments to the federal Clean Air Act in 1990. The federal transportation conformity rule has been revised three times since its initial release. On March 2, 1999, the U.S. Court of Appeals for the District of Columbia issued an opinion in *Environmental Defense Fund versus Environmental Protection Agency* involving the 1997 transportation conformity amendments. The rule will have to be amended again to reflect the court opinion. The rule and the recent court opinion are discussed in detail in Chapter 1.

The rule applies nationwide to “all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan” (40 CFR 93.102). Currently, portions of Maricopa County are designated as nonattainment areas with respect to the national ambient air quality standards for three criteria pollutants, carbon monoxide (CO), ozone (O₃), and particulate matter under ten microns in diameter (PM-10). Therefore, transportation plans and programs for the nonattainment areas for the Maricopa County area must satisfy the requirements of the federal transportation conformity rule.

Under the federal transportation conformity rule, the principal criteria for a determination of conformity for transportation plans and programs are:

- (1) the TIP and LRTP must pass an emissions budget test with a budget that has been found to be adequate by EPA for transportation conformity purposes, or an emissions reduction test;
- (2) the latest planning assumptions and emission models specified for use in air quality implementation plans must be employed;
- (3) the TIP and LRTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and,
- (4) consultation.

Consultation generally occurs at the beginning of the conformity analysis process, on the proposed methodology for the upcoming analysis and the projects to be assessed, and at the end of the process, on the draft report. The final determination of conformity for the TIP and LRTP is the responsibility of the Federal Highway Administration and the Federal Transit Administration.

CONFORMITY TESTS

Conformity tests specified in the federal transportation conformity rule are: (1) the emissions budget test [40 CFR 93.118], and (2) the emissions reduction test [40 CFR 93.119]. For the emissions budget test, predicted emissions for the TIP and LRTP must be less than or equal to the motor vehicle emissions budget specified in the approved air quality implementation plan or the emissions budget found to be adequate for transportation conformity purposes. If there is no approved air quality plan for a pollutant for which the region is in nonattainment or an emission budget is found to be inadequate for transportation conformity purposes, the emissions reduction test applies. The emissions reduction test has two components, a “Build/No-Build” component and/or a “less than 1990 emissions” component. For the “Build/No-Build” component, emissions predicted to occur following the implementation of the TIP and LRTP (the “Build” scenario) must be less than the emissions predicted to occur if the TIP and LRTP were not implemented (the “No-Build” scenario). For the “less than 1990 emissions” component, emissions for the “Build” scenario must be less than emissions levels in the year 1990.

The CO and PM-10 motor vehicle emissions budgets submitted in the MAG Serious Area Plans have been found to be adequate by EPA. A notice of adequacy, effective December 14, 1999, was issued by EPA in the *Federal Register*, finding that the submitted CO motor vehicle emissions budget contained in the MAG 1999 Serious Area Carbon

Monoxide Plan for the Maricopa County Nonattainment Area was adequate for transportation conformity purposes (EPA, 1999b). The EPA also issued a notice of adequacy in the *Federal Register*, effective April 21, 2000, finding that the submitted PM-10 motor vehicle emissions budget contained in the Revised MAG 1999 Serious Area Particulate Plan for PM-10 was adequate for transportation conformity purposes (EPA, 2000a).

Chapter 1 summarizes the applicable air quality implementation plans and conformity tests for CO, O₃, and PM-10. For the 2001 MAG Conformity Analysis, the emissions budget test was applied for CO, because the CO emissions budget was found to be adequate by EPA in 1999 and there have been no violations of the CO standard at any monitor in the region since 1996. For ozone, an emissions budget test was performed for volatile organic compounds (VOC), because an approved SIP budget for VOC is contained in the Revised 1998 15 Percent Rate of Progress Federal Implementation Plan for ozone. Both the emissions budget test and the “Build/No-Build” component of the emissions reduction test were applied for PM-10. The emissions budget test *and* emissions reduction test were applied in this conformity analysis for PM-10, because EPA has not taken final approval action on the Revised MAG 1999 Serious Area Particulate Plan for PM-10, including a request for a five-year extension of the attainment date to December 31, 2006. Unlike CO and ozone, for which there have been no violations in four years, attainment of the National Ambient Air Quality Standards for PM-10 has not been demonstrated at air quality monitors in the region.

RESULTS OF THE CONFORMITY ANALYSIS

A regional emissions analysis was conducted for the years 2006, 2015, and 2021 for each pollutant. All analyses were conducted using the latest planning assumptions and emissions models. The major conclusions of the 2001 MAG Conformity Analysis are:

- For carbon monoxide, the total regional vehicle-related emissions associated with implementation of the TIP and LRTP for all years tested are projected to be less than the emissions budget found to be adequate for transportation conformity purposes from the MAG 1999 Serious Area Plan for Carbon Monoxide. The applicable conformity test for CO is therefore satisfied. The results of the regional emissions analysis for CO are presented in Figure ES-1.
- For volatile organic compounds, the total regional vehicle-related emissions associated with implementation of the TIP and LRTP for all years tested are projected to be less than the emissions budget specified in the applicable Revised 1998 15 Percent Rate of Progress Federal Implementation Plan for ozone. The conformity test for ozone is therefore satisfied. The results of the regional emissions analysis for VOC are presented in Figure ES-2.
- For PM-10, the total regional vehicle-related emissions associated with implementation of the TIP and LRTP for all years tested are projected to be less than the emissions budget found to be adequate for transportation conformity purposes

from the Revised MAG 1999 Serious Area Particulate Plan for PM-10 and less than the corresponding “No-Build” scenarios. The conformity tests for PM-10 are therefore satisfied. The results of the regional emissions analysis for PM-10 are presented in Figure ES-3.

- Implementation of the TIP and LRTP will support and not impede the implementation of the TCMs that have been adopted as part of applicable air quality implementation plans. The current status of TCM implementation is documented in Chapter 5 of this report. Figure ES-4 presents the total funding programmed in the TIP for transportation projects that implement or provide for the timely implementation of transportation control measures and other air quality measures.
- Consultation has been conducted in accordance with federal requirements.

REPORT ORGANIZATION

The report contains six chapters which provide: (1) a review of the applicable federal and state conformity rules and requirements, air quality implementation plans, and conformity test requirements, (2) a discussion of the latest planning assumptions, (3) a summary of the transportation model characteristics, key socioeconomic data, and other data related to the land use and transportation system forecasts, (4) a description of the air quality modeling used to estimate emission factors and mobile source emissions, (5) documentation required under the federal conformity rule for transportation control measures, and (6) the results of the conformity analysis for the TIP and LRTP.

Excerpts from the applicable air quality implementation plans, consultation documentation and other related information are contained in the Appendices. The appendices include copies of memoranda (methodology and list of regionally significant projects) previously circulated for consultation and responses to comments received to date. The appendices of the final version of this report will also include a transcript of the public hearing to be conducted on the draft report. Any comments received and responses made as part of the final 30-day consultation period on this draft report will also be included in the appendices.

Figure ES-1: Carbon Monoxide Results for Conformity Budget Test

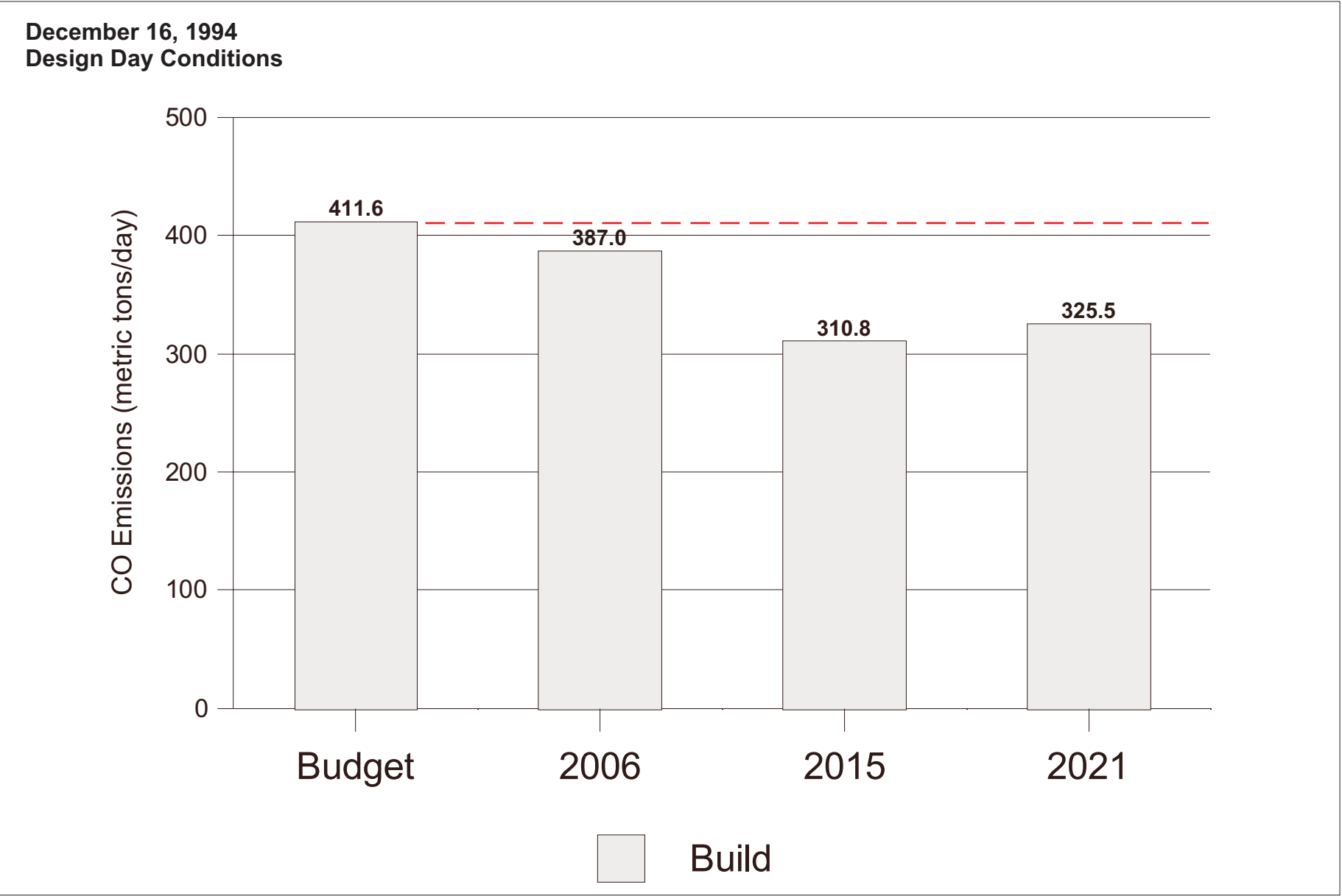


Figure ES-2: Volatile Organic Compounds (VOC) Results for Conformity Budget Test

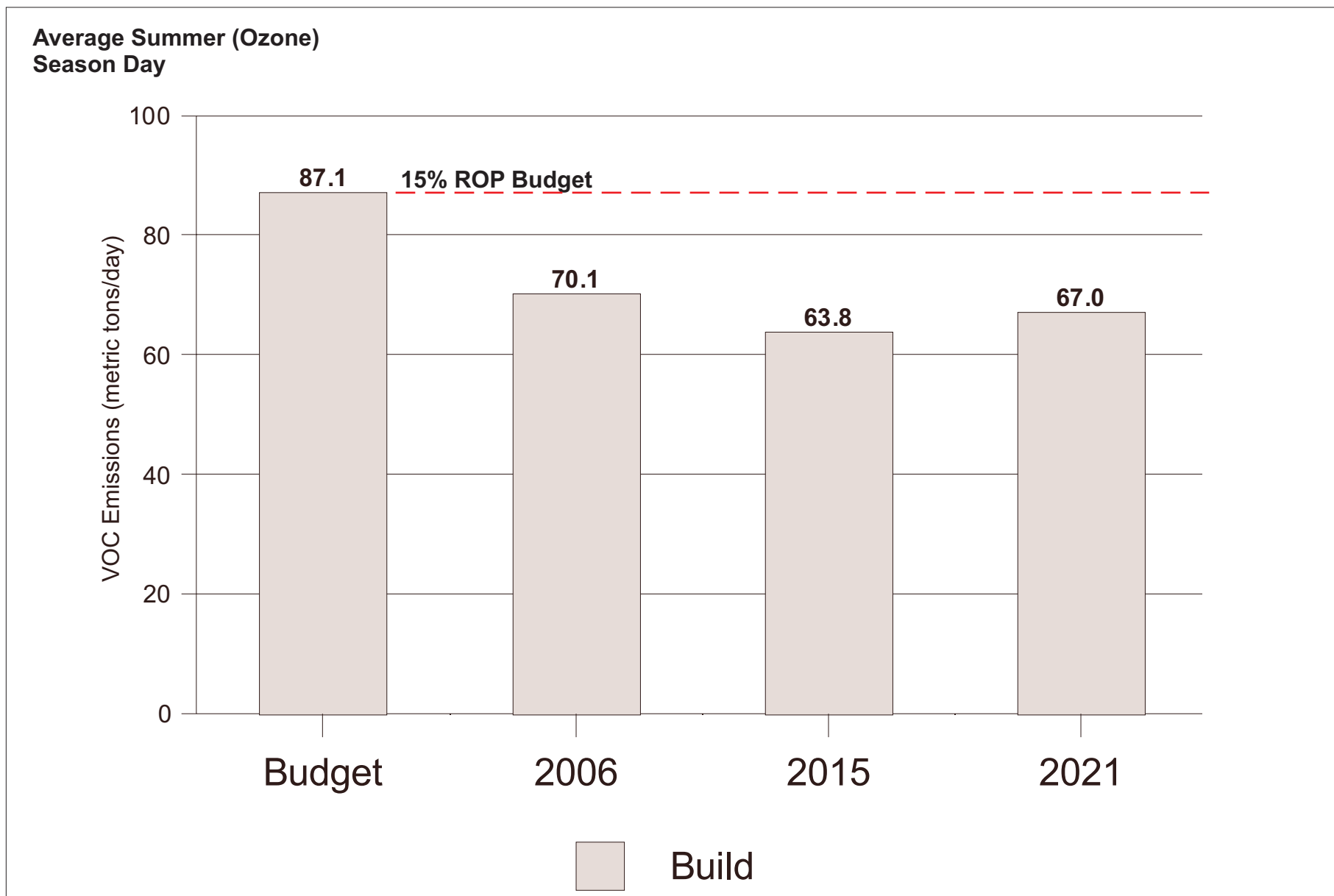
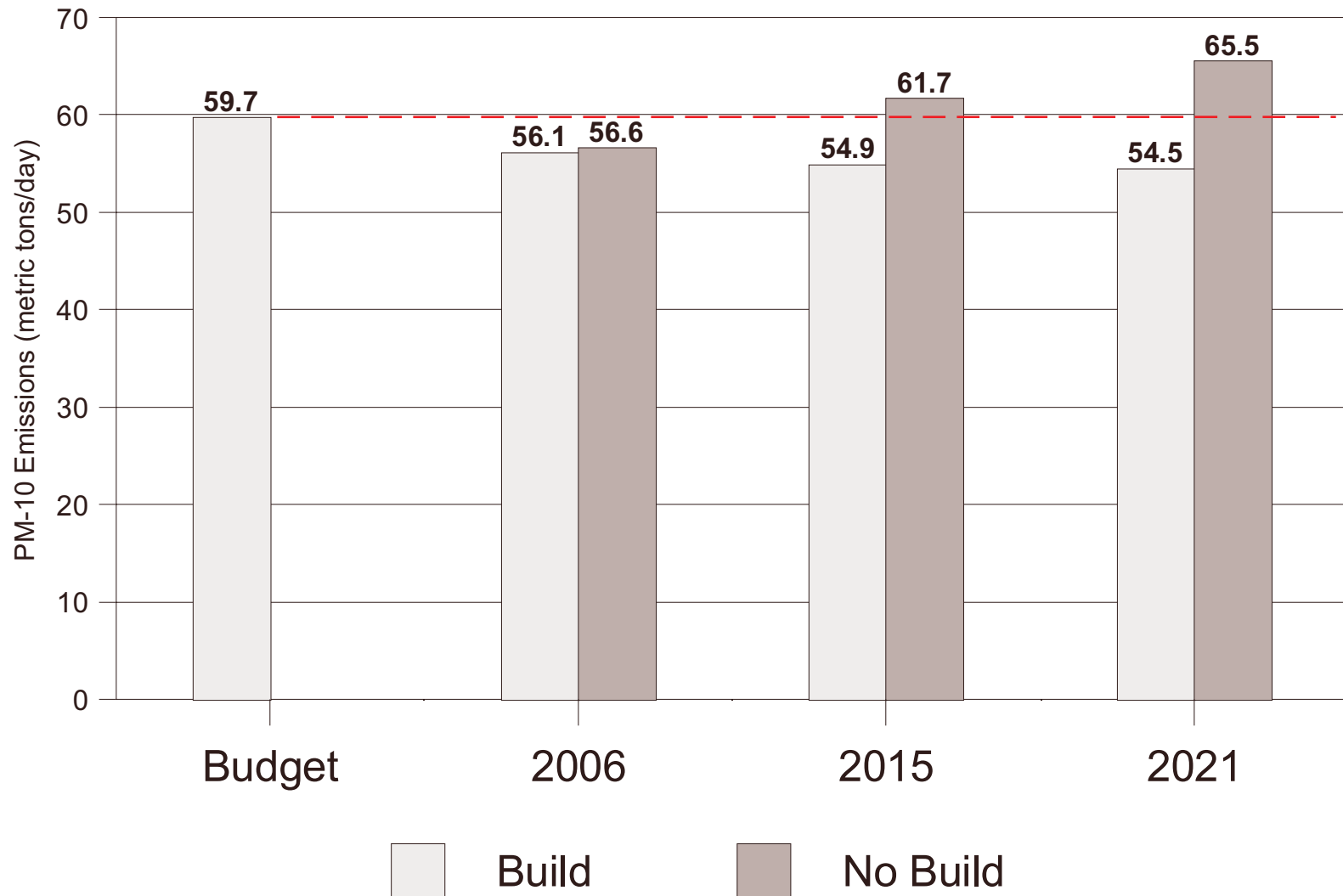


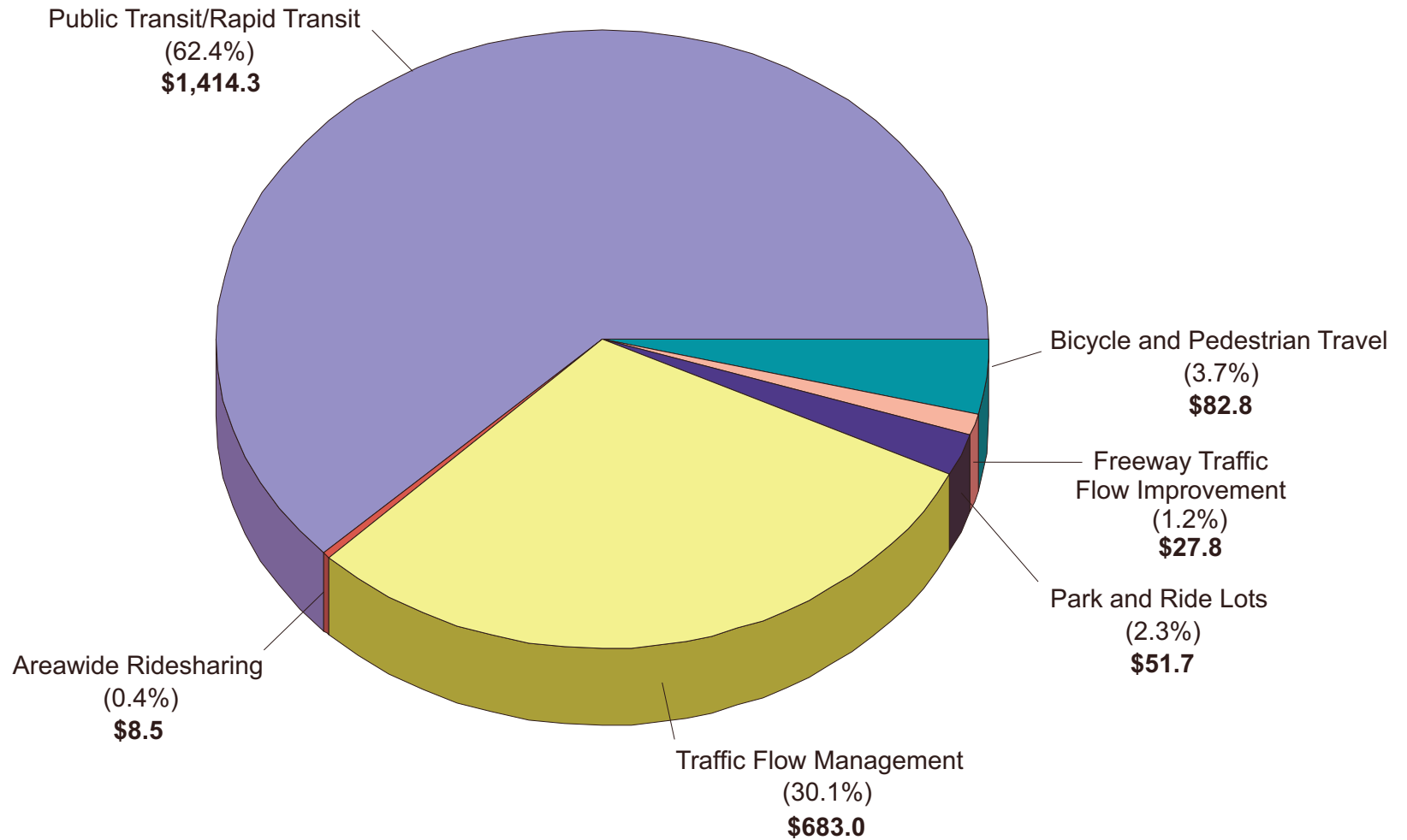
Figure ES-3: PM-10 Results for Conformity Budget Test and Emission Reduction (Build/No Build) Test



ES-7

Figure ES-4: Transportation Control Measure Funding in the Draft FY 2002-2006 MAG Transportation Improvement Program

Figures are in
millions of dollars



Total = \$2268.1 million.

An additional \$831.9 million is programmed for paving of streets, shoulders, and alleys and \$7.2 million is allocated for the purchase of PM-10 efficient street sweepers.